

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P589198

Luminaire Tested: **FMR-24-2-LD4-2STD-35-UNV-93-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589198
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-2STD-35-UNV-93-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

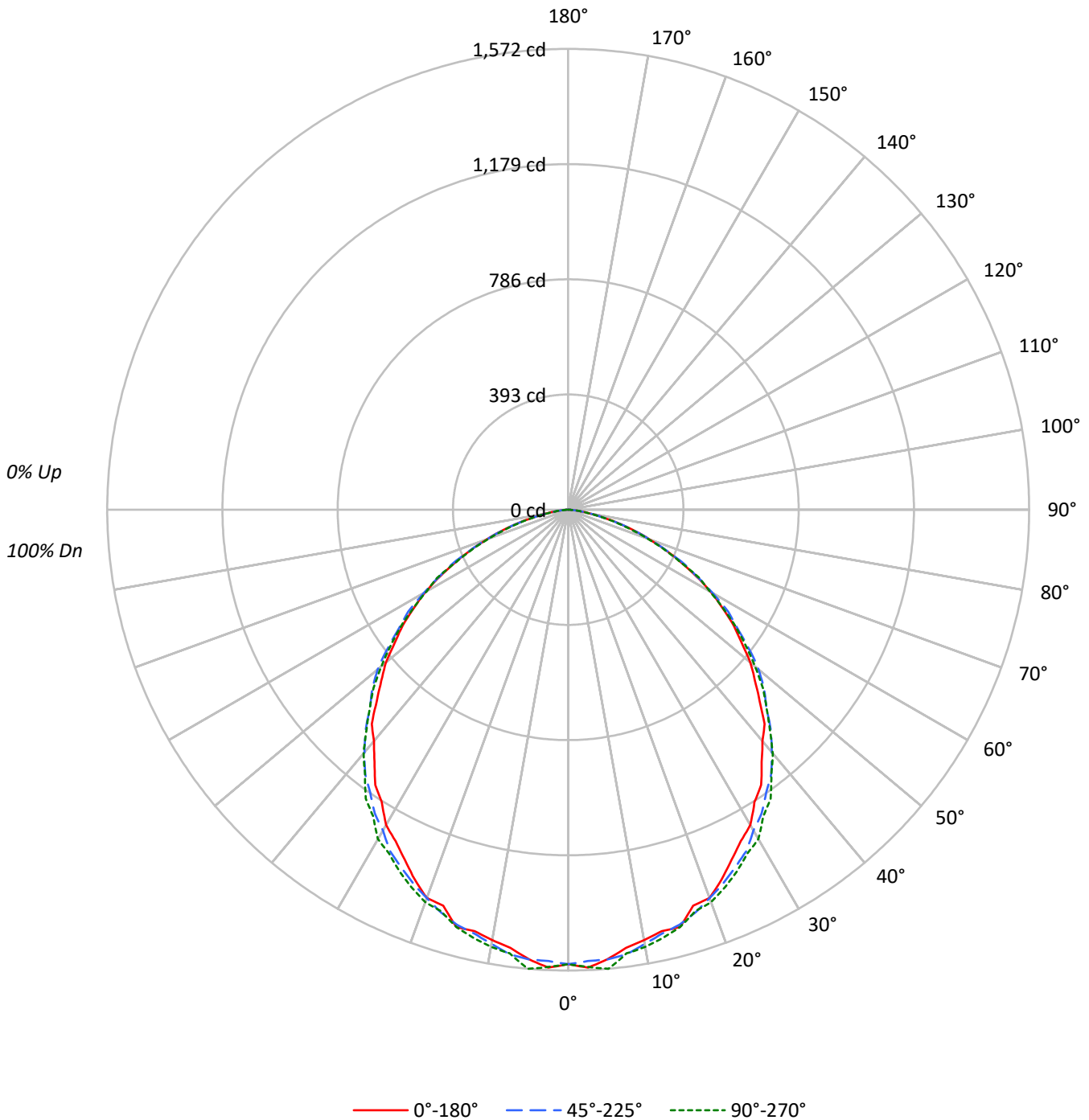
Lumens per Lamp: N/A
Luminaire Lumens: 3907.0 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4172	4172	4172
5°	4158	4159	4247
10°	4074	4109	4138
15°	4106	4083	4106
20°	4036	4036	4079
25°	3912	3998	4042
30°	3859	3926	4031
35°	3768	3866	3953
40°	3621	3795	3812
45°	3511	3636	3642
50°	3396	3550	3481
55°	3236	3299	3275
60°	3026	3056	3001
65°	2698	2767	2679
70°	2315	2323	2258
75°	1833	1829	1758
80°	1229	1195	1148
85°	667	661	618



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.8	3.7
10°-20°	413.3	10.6
20°-30°	619.2	15.8
30°-40°	733.8	18.8
40°-50°	735.2	18.8
50°-60°	624.0	16.0
60°-70°	420.7	10.8
70°-80°	184.9	4.7
80°-90°	30.0	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1178.3	30.2
0°-40°	1912.1	48.9
0°-60°	3271.3	83.7
0°-90°	3907.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3907.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1550	1550	1550	1550	1550	
5°	1539	1536	1540	1535	1572	145
15°	1474	1457	1466	1473	1474	411
25°	1318	1325	1346	1364	1361	609
35°	1147	1150	1177	1204	1203	712
45°	923	940	956	980	957	714
55°	690	685	703	698	698	614
65°	424	418	434	418	421	421
75°	176	173	176	164	169	189
85°	22	21	21	21	20	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1550.2	1550.2	1550.2	1550.2	1550.2
2.5°	1563.6	1551.8	1540.8	1553.6	1561.4
5°	1539.2	1535.6	1539.8	1535.2	1572.2
7.5°	1507.6	1521.4	1529.4	1524.4	1526.6
10°	1490.8	1485.9	1503.8	1516.2	1514.4
12.5°	1472.7	1479.9	1480.9	1494.4	1495.6
15°	1473.7	1456.7	1465.7	1473.3	1473.9
17.5°	1416.5	1434.9	1441.1	1458.5	1436.9
20°	1409.5	1396.1	1409.5	1427.3	1424.5
22.5°	1366.5	1351.4	1380.3	1396.1	1395.1
25°	1317.6	1324.8	1346.4	1364.1	1361.3
27.5°	1274.8	1283.2	1314.0	1338.2	1322.6
30°	1241.8	1237.6	1263.6	1285.2	1297.2
32.5°	1182.7	1197.9	1228.3	1249.8	1238.4
35°	1146.9	1150.3	1176.9	1204.1	1203.3
37.5°	1084.2	1100.1	1137.5	1145.1	1138.1
40°	1030.8	1046.6	1080.4	1088.6	1085.2
42.5°	991.4	994.2	1023.2	1032.6	1017.6
45°	922.7	939.9	955.5	980.2	956.9
47.5°	864.3	872.3	905.9	912.5	900.3
50°	811.2	814.0	847.9	839.6	831.6
52.5°	744.6	756.4	775.4	773.8	764.4
55°	689.7	685.1	703.1	698.3	698.1
57.5°	623.9	631.9	646.7	639.1	626.9
60°	562.2	562.4	567.8	559.2	557.6
62.5°	493.6	496.0	497.2	486.6	503.8
65°	423.7	418.1	434.5	417.9	420.7
67.5°	359.5	362.3	360.7	350.3	354.3
70°	294.2	297.8	295.2	283.4	287.0
72.5°	234.6	230.2	233.0	218.2	225.0
75°	176.3	172.7	175.9	163.5	169.1
77.5°	120.1	122.9	120.9	114.3	118.1
80°	79.3	77.1	77.1	73.3	74.1
82.5°	46.2	44.0	43.4	42.2	44.0
85°	21.6	21.0	21.4	20.8	20.0
87.5°	7.8	8.0	8.0	7.6	7.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)